

## CLAIMS

What is claimed is:

- 1 1. A method of controlling access to content in a multimedia communication  
2 network system having a plurality of access devices, the method comprising:  
3 receiving configuration information related to a user object from a user via an  
4 access device of the plurality of access devices, the configuration information  
5 defining multimedia content that can be accessed by instantiating the user object in  
6 an access device; and  
7 providing the received configuration information to another access device of  
8 the plurality of access devices.
- 1 2. The method of claim 1, further comprising receiving revised configuration  
2 information related to the user object via an access device of the plurality of access  
3 devices and providing the received revised configuration information to all of the  
4 access devices of the plurality of access devices.
- 1 3. The method of claim 1, further comprising receiving configuration information  
2 related to a plurality of user objects via one or more of the access devices of the  
3 plurality of access devices and providing the configuration information to all of the  
4 access devices of the plurality of access devices.
- 1 4. The method of claim 3, further comprising assigning a ticket number to the  
2 revised configuration information.



1 5. The method of claim 4, further comprising storing the ticket number in a  
2 revision history in the multimedia communication network system.

1 6. The method of claim 5, wherein the revision history is stored in a server of the  
2 multimedia communication network system.

1 7. A control system of controlling access to content in a multimedia  
2 communication network system having a plurality of access devices, the control  
3 system comprising:

4 means for receiving configuration information related to a user object from a  
5 user via an access device of the plurality of access devices, the configuration  
6 information defining multimedia content that can be accessed by instantiating the  
7 user object in an access device; and

8 means for providing the received configuration information to another access  
9 device of the plurality of access devices.

1 8. The control system of claim 7, further comprising means for receiving revised  
2 configuration information related to the user object via an access device of the  
3 plurality of access devices and for providing the received revised configuration  
4 information to all of the access devices of the plurality of access devices.

1 9. The control system claim 7, further comprising means for receiving  
2 configuration information related to a plurality of user objects via one or more of the  
3 access devices of the plurality of access devices and for providing the configuration  
4 information to all of the access devices of the plurality of access devices.



1 10. The control system of claim 9, further comprising means for assigning a ticket  
2 number to the revised configuration information.

1 11. The control system of claim 10, further comprising a revision history for  
2 storing the ticket number.

1 12. The control system of claim 11, wherein the revision history is stored in a  
2 server of the multimedia communication network system.

1 13. A machine-readable medium for use in a multimedia communication network  
2 having a plurality of access devices, the machine-readable medium containing  
3 instructions, the instructions when executed by a machine cause the machine to  
4 perform operations comprising:

5 receiving configuration information related to a user object from a user via an  
6 access device of the plurality of access devices, the configuration information  
7 defining multimedia content that can be accessed by instantiating the user object in  
8 an access device; and

9 providing the received configuration information to another access device of  
10 the plurality of access devices.

1 14. The machine-readable medium of claim 13, wherein the operations further  
2 comprise receiving revised configuration information related to the user object via an  
3 access device of the plurality of access devices and providing the received revised  
4 configuration information to all of the access devices of the plurality of access  
5 devices.



1 15. The machine-readable medium of claim 13, wherein the operations further  
2 comprise receiving configuration information related to a plurality of user objects via  
3 one or more of the access devices of the plurality of access devices and providing  
4 the configuration information to all of the access devices of the plurality of access  
5 devices.

1 16. The machine-readable medium of claim 13, wherein the operations further  
2 comprise assigning a ticket number to the revised configuration information.

1 17. The machine-readable medium of claim 16, wherein the operations further  
2 comprise storing the ticket number in a revision history stored in the machine-  
3 readable medium.

1 18. A method of providing configuration information related to user object of a  
2 multimedia communication network system having a plurality of access devices, the  
3 configuration information including values for a plurality of configuration parameters,  
4 the method comprising:

5 receiving a portion of the configuration information related from a user via an  
6 access device of the plurality of access devices;

7 assigning a ticket number to the received portion of the configuration  
8 information;

9 storing the ticket number in a revision history; and

10 providing the ticket number to the access device.

1 19. The method of claim 18, further comprising:



2        setting a bit in a bit vector, the bit vector having a plurality of bits each being  
3        associated to a corresponding configuration parameter of the user object; wherein  
4        the set bit indicates the configuration parameter associated with the received  
5        configuration information; and  
6        providing the bit vector to the access device.

1        20.    The method of claim 18, wherein the revision history has a fixed size.

1        21.    The method of claim 18, further comprising providing the portion of the  
2        configuration information to a second access device of the plurality of access  
3        devices.

1        22.    An update system for providing configuration information related to user  
2        object of a multimedia communication network system having a plurality of access  
3        devices and a revision history, the configuration information including values for a  
4        plurality of configuration parameters, the method comprising:

5        means for receiving a portion of the configuration information related from a  
6        user via an access device of the plurality of access devices;

7        means for assigning a ticket number to the received portion of the  
8        configuration information;

9        means for storing the ticket number in the revision history; and

10       providing the ticket number to the access device.

1        23.    The update system of claim 22, further comprising:

2        means for setting a bit in a bit vector, the bit vector having a plurality of bits  
3        each being associated to a corresponding configuration parameter of the user



4 object; wherein the set bit indicates the configuration parameter associated with the  
5 received configuration information; and  
6 means for providing the bit vector to the access device.

1 24. The update system of claim 22, wherein the revision history has a fixed size.

1 25. The update system of claim 22, further comprising means for providing the  
2 portion of the configuration information to a second access device of the plurality of  
3 access devices.

1 26. A machine-readable medium for use in a multimedia communication network  
2 system having a plurality of access devices, the configuration information including  
3 values for a plurality of configuration parameters, the machine-readable medium  
4 containing instructions which, when executed by an apparatus, cause the apparatus  
5 to perform operations comprising:

6 receiving a portion of the configuration information related from a user via an  
7 access device of the plurality of access devices;

8 assigning a ticket number to the received portion of the configuration  
9 information;

10 storing the ticket number in a revision history; and

11 providing the ticket number to the access device.

1 27. The machine-readable medium of claim 26, wherein the operations further  
2 comprise:

3 setting a bit in a bit vector, the bit vector having a plurality of bits each being  
4 associated to a corresponding configuration parameter of the user object; wherein



5 the set bit indicates the configuration parameter associated with the received  
6 configuration information; and  
7 providing the bit vector to the access device.

1 28. The machine-readable medium of claim 26, wherein the revision history has a  
2 fixed size.

1 29. The machine-readable medium of claim 26, wherein the operations further  
2 comprise providing the portion of the configuration information to a second access  
3 device of the plurality of access devices.

1 30. A method of providing updated configuration information related to user  
2 object of a multimedia communication network system having a plurality of access  
3 devices, the configuration information including values for a plurality of configuration  
4 parameters, the system including a revision history configured to store identifiers  
5 and bit vectors associated with updates to the configuration information related to  
6 the user object, the method comprising:

7 receiving an identifier from an access device of the plurality of access  
8 devices;

9 determining an update vector as a function of the received identifier and any  
10 identifiers in the revision history that are more recent than the ticket number; and

11 providing the update vector to the access device.

1 31. The method of claim 30, further comprising providing a portion of updated  
2 configuration information to the access device at the request of the access device,  
3 wherein the access generates the request in response to the update vector.



1 32. The method of claim 30, further comprising providing to the access device the  
2 most recent identifier of the identifiers used in determining the update vector.

1 33. The method of claim 30, wherein determining the update vector further  
2 comprises generating the update vector as a function of the bit vectors associated  
3 with the identifiers that are more recent than the received identifier.

1 34. The method of claim 33, wherein the function of the bit vectors comprises the  
2 logical-OR of the bit vectors associated with the identifiers that are more recent than  
3 the received identifier.

1 35. A machine-readable medium for use in a multimedia communication network  
2 system having a plurality of access devices, the configuration information including  
3 values for a plurality of configuration parameters, the system including a revision  
4 history configured to store identifiers and bit vectors associated with updates to the  
5 configuration information related to the user object, the machine-readable medium  
6 providing instructions that when executed by a machine cause the machine to  
7 perform operations comprising:

8 receiving an identifier from an access device of the plurality of access  
9 devices;

10 determining an update vector as a function of the received identifier and any  
11 identifiers in the revision history that are more recent than the ticket number; and

12 providing the update vector to the access device.



1 36. The machine-readable medium of claim 35, wherein the operations further  
2 comprise providing a portion of updated configuration information to the access  
3 device at the request of the access device, wherein the access generates the  
4 request in response to the update vector.

1 37. The machine-readable medium of claim 35, wherein the operations further  
2 comprise providing to the access device the most recent identifier of the identifiers  
3 used in determining the update vector.

1 38. The machine-readable medium of claim 35, wherein the operation of  
2 determining the update vector further comprises an operation of generating the  
3 update vector as a function of the bit vectors associated with the identifiers that are  
4 more recent than the received identifier.

1 39. The machine-readable medium of claim 38, wherein the function of the bit  
2 vectors comprises the logical-OR of the bit vectors associated with the identifiers  
3 that are more recent than the received identifier.

1 40. An update system for providing updated configuration information related to  
2 user object of a multimedia communication network system having a plurality of  
3 access devices, the configuration information including values for a plurality of  
4 configuration parameters, the multimedia communication network system including  
5 a revision history configured to store identifiers and bit vectors associated with  
6 updates to the configuration information related to the user object, the update  
7 system comprising:



8 means for receiving an identifier from an access device of the plurality of  
9 access devices;

10 means for determining an update vector as a function of the received  
11 identifier and any identifiers in the revision history that are more recent than the  
12 ticket number; and

13 means for providing the update vector to the access device.

1 41. The update system of claim 40, further comprising means for providing to the  
2 access device the most recent identifier of the identifiers used by the means for  
3 determining in determining the update vector.

1 42. The update system of claim 40, further comprising means for providing a  
2 portion of updated configuration information to the access device at the request of  
3 the access device, wherein the access generates the request in response to the  
4 update vector.

1 43. The update system of claim 40, wherein the means for determining the  
2 update vector further comprises means for generating the update vector as a  
3 function of the bit vectors associated with the identifiers that are more recent than  
4 the received identifier.

1 44. The update system of claim 43, wherein the function of the bit vectors  
2 comprises the logical-OR of the bit vectors associated with the identifiers that are  
3 more recent than the received identifier.